REMARKS

Claims 1-21 were pending. Claims 4, 9 and 12 were previously withdrawn.

Claim 15 has been amended to fix a minor grammatical error and to better clarify the language of the claim – specifically, to insert the word "a" before the words, "low-sloped roof." No new matter has been added.

Claims 17 and 19 have been canceled without prejudice.

Claims 1-16, 18, 20 and 21 are now pending.

I. Double Patenting Rejections

Claims 1-21 have been provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/918,268 in view of U.S. Patent No. 5,968,669 to Liu et al. ("Liu").

In response, Applicants respectfully request that these rejections be held in abeyance until the claims of either the present application or copending Application No. 10/918,268 are found to be allowable. At that time, Applicants will offer to file a Terminal Disclaimer if appropriate.

II. Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1-5, 8, 10, 12-16, 18 and 20 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent Publication No. US 2002/0114940 to Clemens et al. ("Clemens"). Applicants respectfully traverse.

Clemens is directed to a coating system comprising: (1) an asphalt-based basecoat; and (2) a thermoplastic powder coating topcoat overlying the base coat (Clemens, Abstract). An important feature of the coating composition of Clemens is that its "basecoat" ***consists***

essentially of "between 10 and 90% of a petroleum asphalt" (Clemens, Abstract, emphasis added). That is, Clemens is directed to an **asphaltic coating system**. Further, the system must contain **two separate coats**; specifically, a "basecoat" (Clemens, Abstract; paragraphs [0010]-[0019]) on top of which is a "thermoplastic powder coating topcoat" (Clemens, Abstract; paragraphs [0020]-[0029]). A careful review of Clemens reveals that first, Clemens makes it clear that these two coats are separate and distinct features; and second, that neither this "basecoat" nor this "topcoat" exhibits each and every element of the compositions of the present invention.

The Office Action alleges that Clemens teaches a "topcoat" at paragraph [0020] (Office Action, page 6); and that this "topcoat" contains: (1) a cured reaction product/mixture of a polymeric binder; (2) heat expandable graphite particles; (3) a polymeric carrier; and (4) an effective amount of pigments; wherein the mixture has a solids content within the scope of claim 1 (Office Action, page 6).

However, the Office Action overlooks the fact that <u>two separate coats</u> are required by Clemens, and further, that neither the "topcoat" nor the "basecoat" taught by Clemens contains all of the components recited in the coating compositions of the present invention. Looking at each of alleged components (1) through (4) in the proceeding paragraph in view of currently pending independent claims 1 and 15, it is clear that these components are not all taught by Clemens as alleged in the Office Action. For example, the "topcoat" of Clemens does not teach a cured reaction product/mixture of a polymeric binder, as the cited portion of Clemens teaches that a particular phenol compound is "used as an anti-oxidant to protect the cured resin from thermal decomposition, ***upon exposure to the flame applied topcoat***" (Clemens, paragraph

[0169], emphasis added). Clemens clearly teaches that such a composition, if present, is not present in the "topcoat."

With regard to the alleged teaching of heat expandable graphite particles, cited paragraph [0029] is silent in this regard and paragraph [0187] is directed to components in the basecoat of Clemens (*see* Clemens, paragraph [0154], indicating that the paragraphs following are directed to components of the basecoat). Further, with regard to a polymeric carrier, paragraph [0029] is silent as to the presence of this component in either the "topcoat" or "basecoat" of Clemens.

Thus, neither the "basecoat" nor the "topcoat" of Clemens could be argued to be the same as a coating composition of the present invention. Unlike the "basecoat" of Clemens, the coating compositions of the present invention do not consist essentially of between 10 and 90% of a petroleum asphalt (Clemens, Abstract). Unlike the "topcoat" of Clemens, the coating compositions of the present invention are not powders, but rather, comprise a polymeric binder and a polymeric carrier (claims 1 and 15). To establish anticipation, is not sufficient to allege that each element of the claims can be found in a single reference; the elements must be "arranged as in the claim." *Lindemann Maschinefabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984). Here, where Clemens clearly teaches elements that must be present in separate "basecoat" and "topcoat" layers, Clemens does not teach each and every element of independent claims 1 or 15 within a single topcoat composition. Therefore, Clemens does not anticipate independent claim 1, or claims 2-5, 8, 10 or 12-14 that depend therefrom; or independent claim 15, or claims 16, 18 or 20 that depend therefrom.

For at least these reasons, Applicants respectfully submit that the rejection of these claims under 35 U.S.C. §102(b) as been overcome and should be withdrawn.

II. Claim Rejections Under 35 U.S.C. § 103(a)

Claims 6, 7, 9, 11, 17, 19 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Clemens in view of U.S. Patent No. 5,968,669 to Liu et al. ("Liu). Applicants respectfully traverse.

With regard to claims 7 and 21, The Office Action acknowledges that "Clemens fails to disclose an intercalant positioned within the graphite lattice" (Office Action, page 8). Nor does Liu cure this defect. The Office Action alleges that it would be obvious to modify the coatings of Clemens by incorporating the heat expandable graphite of Liu, and that Liu teaches that intercalant can be inserted "between the planes of the carbon atoms" of crystalline graphite (*Id.*). However, Applicants respectfully submit that a *prima facie* case of obviousness has not been established for at least the following reasons.

First, Clemens and Liu, viewed either alone or in combination, do not teach or suggest each and every element of the presently pending claims. As an initial matter, as stated previously, Clemens is directed to coating systems that contain **two separate coats**; specifically, a "basecoat" (Clemens, Abstract; paragraphs [0010]-[0019]) on top of which is a "thermoplastic powder coating topcoat" (Clemens, Abstract; paragraphs [0020]-[0029]). As stated previously, neither this "basecoat" nor this "topcoat" exhibits each and every element of the coating compositions of the present invention.

Clemens teaches that the "basecoat" consists essentially of "between 10 and 90% of a petroleum asphalt" (Clemens, Abstract). Further, the "topcoat" of Clemens is a powder coating topcoat – that is, in contrast to the top coating compositions of the present invention, the topcoat does not contain a polymeric binder and a polymeric carrier. It is a powder. Thus, neither the

"basecoat" nor the "topcoat" of Clemens could be argued to be the same as the coating compositions of the present invention.

Second, there is no motivation to combine the teachings of Clemens with those of Liu. There is no teaching or suggestion that the expandable graphite of Liu could be combined with either: a basecoat containing between 10 and 90% of a petroleum asphalt of (the "basecoat" of Clemens); or a powdered coating (the "topcoat" of Clemens). Even if there were such a motivation to combine (which Applicants submit there is not), the resultant product would not be the coatings of the present invention. An attempt to combine a graphite of Liu with a powder topcoat of Clemens would fail, as the graphite would be unable to expand within the powder coating. An attempt to combine a graphite of Liu with a basecoat of Clemens would also fail, at least for the reason that the resultant coating composition would not be a top coat as the present claims recite. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959) (obviousness cannot be established where a "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." *Id.* at 813, 123 USPQ at 352).

Third, even if Clemens and Liu were combined as suggested in the Office Action, there would be no expectation of success in such a combination. Because of the high degree of asphalt in the basecoat of Clemens, a skilled artisan would not expect that such a composition would exhibit highly reflective properties. This is true even when combined with the teachings of Liu – that is, a coating composition as taught by Clemens, even having incorporated within it a heat

expandable graphite as it is alleged that Liu teaches, would not be expected to yield successfully a coating having the superior properties of the presently claimed invention. Similarly, a powder coating (as the "topcoat" of Clemens is best characterized) would not be expected to incorporate successfully an expandable graphite component. As alleged in the Office Action, the expandable graphite of Liu teaches a "graphite lattice" into which is an intercalant could be positioned. Such a setup would be impossible if the coating were either between 10 and 90% of a petroleum asphalt, or a powder coating.

Thus, for at least these reasons, Applicants respectfully submit that the rejection of claims 7 and 21 under 35 U.S.C. § 103(a) has been overcome and should be withdrawn.

With regard to claim 6, the Office Action alleges that Liu teaches the presence of titanium dioxide as a pigment, and that it would have been obvious to modify the teachings of Clemens to include titanium dioxide. However, because, as stated previously, Clemens is directed to coating systems that contain **two separate coats**; specifically, a "basecoat" (Clemens, Abstract; paragraphs [0010]-[0019]) on top of which is a "thermoplastic powder coating topcoat" (Clemens, Abstract; paragraphs [0020]-[0029]), neither this "basecoat" nor this "topcoat" exhibits each and every element of the coating compositions of the present invention.
Nor do the teachings of Liu cure this defect with regard to the identity of the pigments. Because Clemens teaches at most that its "topcoat" contains pigments, a skilled artisan would not be motivated by the two references to incorporate the pigment of Liu into the topcoats of Clemens, absent the other elements recited in claim 6.

Even if a combination were motivated to make such a combination (which Applicants assert it is not), the resultant combination would not yield the present invention as recited in claim 6, and there would be no expectation of success in such a combination. At most, a

combination would yield titanium dioxide in a powder coating absent the other elements of claim 6 – *e.g.*, a polymeric binder and a polymeric carrier (the addition of such elements would change the nature of the "topcoat" of Clemens such that it would no longer be a powder coating). Such a combination would fail. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959) (obviousness cannot be established where a "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." *Id.* at 813, 123 USPQ at 352).

Thus, for at least these reasons, Applicants respectfully submit that the rejection of claim 6 is also not obvious in view of the combination of Clemens and Liu.

With regard to claims 9 and 11, the Office Action acknowledges that Clemens does not teach or suggest the limitations on those claims, but alleges that the teachings of Liu at col. 4, lines 30-45 teaches these limitations. However, Applicants respectfully submit that Liu does not mention such limitations on the polymeric binder and carrier, and have been unable to find such language from a search of the disclosure of Liu, in particular, the range of "about 30 to about 50 wt%" that is alleged in the Office Action. Thus, Applicants respectfully request clarification of the portions of Liu that are alleged to teach or suggest these limitations. Absent sufficient disclosure or suggestion of all of the claim limitations, Applicants respectfully submit that a *prima facie* case of obviousness cannot be maintained, and respectfully request that this rejection be withdrawn.

With regard to claims 17 and 19, Applicants respectfully submit that in view of the present cancellation of these claims, this rejection is moot.

For at least these reasons, Applicants respectfully submit that the rejections under 35 U.S.C. § 103(a) have been overcome, and respectfully request that they be withdrawn.

In view of the above remarks and amendments, Applicants believe that each of the pending claims is in condition for allowance, early notice of which is earnestly solicited. Should any outstanding issues remain, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number below.

No fees are believed to be due for the filing of this Amendment and Response. However, please charge any necessary fees that may be due in connection with this filing, or credit any overpayments, to Deposit Account No. 03-1250, Reference No. FDN-2799, Customer No. 43,309.

Respectfully submitted,

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